

Remarks

Claims 1-39 are pending in the application. All claims stand rejected. By this paper, independent claims 1, 14, and 27 have been amended. Claims 3, 4, 10, 23-25, 29, 30, and 36 have been canceled without prejudice. Reconsideration of all pending claims herein is respectfully requested.

Claims 8, 34, and 39 were objected to due to a number of informalities. Claims 8, 34, and 39 have been amended in compliance with the recommendations in the Office Action.

Claims 1, 14, and 27 stand rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. The Office Action states that the omitted elements are the definitions of N, M, and R. Claims 1, 14, and 27 are amended to eliminate reference to N, M, and R thereby rendering this rejection moot.

Independent claims 1, 14, and 27 stand rejected under 35 U.S.C § 102(e) as being anticipated by U.S. Patent No. 6,615,388 to Takamichi ("Takamichi"). As amended, claims 1 and 27 now include the limitation of the output of each storage element in a column being received by two receiving elements that are physically the closest to each element in the column. Support for this amendment is found on page 61, third paragraph and Fig. 17. In having storage elements between successive columns arranged according to closest proximity, signal travel is reduced.

Takamichi discloses passing data to memory cells that are not the closest in proximity. In Fig. 2 of Takamichi, memory cells 27₁₂, 27₁₃, 27₁₄ do not pass data to

the closest memory cells in the successive column. Thus, each memory cell in column 26 does not pass data to the closest memory cells in the next column. This is also shown in each column 26 in Fig. 2. Fig. 9 and the remaining figures also illustrate passing data to memory cells in successive columns that are not the closest physically to the originating memory cell. Takamichi does not recite any requirement or benefit in passing data to memory cells that are the closest in proximity.

Takamichi does not teach or suggest the limitations of claims 1 and 27. Anticipation under Section 102 is proper only if the reference shows exactly what is claimed. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 USPQ 773, 777 (Fed. Cir. 1985); MPEP § 2131.01. The remaining cited references also have no teaching or suggestion of receiving and outputting data to the closest memory cells in successive columns. Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 14 has been amended to include the limitation of minimization logic to identify a storage element in a final column of said matrix from which to select data based on said storage element having a minimum path metric associated therewith which is found using a binary tree search to form a one-hot vector having a bit therein that corresponds to said minimum path metric. This includes limitations formerly recited in claims 24 and 25.

Claim 14 also recites use of a binary tree search to form a one-hot vector having a bit therein that corresponds to the minimum path metric. Support is found for this limitation on page 65, last paragraph continuing onto page 66. Takimichi and Park do not teach or suggest the use of a binary tree search to form a one-hot vector.

Park's provides a solitary reference to a minimum path metric and there is no association with a binary tree search or a one-hot vector.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP § 2143.03. Because Takamichi and Park do not teach all limitations of claim 14, the Applicant respectfully submits that a *prima facie* case of obviousness cannot be established with these references and requests withdrawal of this rejection.

The remaining claims depend from their respective Independent claims, and are likewise believed to be allowable by virtue of that dependency.

In view of the foregoing, all pending claims represent patentable subject matter. A Notice of Allowance is respectfully requested.

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